

CLAIMS

What is claimed is:

1. A toothpaste composition comprising:
a binder; a surface active agent; an abrasive; a humectant; and
5 water; in which:
the abrasive is silica, the composition additionally comprises a silica thickener, and the composition comprises 1 to 7 wt% of the silica thickener, less than 15 wt% of the silica abrasive, 45 to 70 wt% water, 0.8 to 3.0 wt% of a surface active agent; 0.05 to 3.0 wt% the binder; or
10 the abrasive is silica, the composition additionally comprises a silica thickener, the composition comprises 2 to 22 wt% total silica, 0.8 to 3.0 wt% of a surface active agent; 0.05 to 3.0 wt% the binder, and the composition additionally comprises about 0.1 to 8.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture
15 thereof; or
the binder is a calcium based abrasive, the binder is a cellulose gum, and the composition comprises 25 to 55 wt% of the calcium based abrasive, 35 to 60 wt% water, 0.8 to 3.0 wt% of the surface active agent, and 1.0 to 3.0 wt% of the binder.
- 20 2. The composition of claim 1 in which the abrasive is silica.
3. The composition of claim 2 in which the composition comprises 50 to 70 wt% water.
4. The composition of claim 2 in which the composition comprises 60 to 70 wt% water.
- 25 5. The composition of any of claims 2 to 4 in which the composition has an as made viscosity of less than 200,000 cp.
6. The composition of claim 5 in which the composition has an as made viscosity of 80,00 cp to 180,000 cp.
7. The composition of claim 6 in which the composition has an
30 as made viscosity of 120,00 cp to 155,000 cp.
8. The composition of any of claims 2 to 7 in which the binder is selected from the group consisting of carrageenan, cellulose gums, and

xanthan.

9. The composition of any of claims 2 to 8 in which the composition additionally comprises 0.1 to 8.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture thereof.

10. The composition of any of claims 2 to 8 in which the composition additionally comprises 0.2 to 4.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture thereof.

11. The composition of claim 1 in which the abrasive is a calcium based abrasive.

12. The composition of claim 11 in which the abrasive is calcium carbonate.

13. The composition of claim 11 or claim 2 in which the composition comprises about 40 to 60 wt% water.

14. The composition of any of claims 11 to 13 in which the binder is carboxymethyl cellulose.

15. The composition of any of claims 11 to 14 in which the composition additionally comprises 1.0 to 7.0 wt% of a silica thickener.

16. The composition of claim 15 in which the composition additionally comprises 0.5 to 7.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture thereof.

17. The composition of claim 15 in which the composition additionally comprises 1.0 to 3.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture thereof.

18. The composition of claim 1 in which the abrasive is silica, the composition additionally comprises a silica thickener, the composition comprises 2 to 22 wt% total silica, 0.8 to 3.0 wt% of a surface active agent; 0.05 to 3.0 wt% the binder, and the composition additionally comprises about 0.1 to 8.0 wt% of non-colloidal microcrystalline cellulose, colloidal microcrystalline cellulose, or a mixture thereof.

19. The composition of claim 18 in which the composition

comprises 1 to 7 wt% of the silica thickener and 8 to 18 wt% total silica.

20. The composition of claim 18 or claim 19 in which the composition has an as made viscosity of 80,00 cp to 180,000 cp.

21. The composition of claim 18 or claim 19 in which the
5 composition has an as made viscosity of 120,00 cp to 155,000 cp.

22. The composition of any preceding claim in which the composition additionally comprises a flavoring and a sweetener.